

What is claimed is:

- 1. A thermally controlled apparatus for lining a semiconductor processing chamber comprising:
- 5 a base;

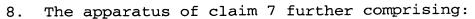
an inner wall connected to the base; and,

a passage disposed in the base, the inner wall or the base and the inner wall, the passage having an inlet and outlet.

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- 2. The apparatus of claim 1 further comprising an outer wall connected to the base.
- 3. The apparatus of claim 2 wherein the outer wall further 15 comprises a pumping port.
 - 4. The apparatus of claim 1 wherein the inner wall further comprises a magnet disposed in the inner wall.
- 20 5. The apparatus of claim 1 wherein the base is comprised of a material selected from the group of aluminum, ceramic and stainless steel.
 - 6. The apparatus of claim 1 further comprising:
- a first and second boss projecting from the base, the first boss comprising a hole in fluid communication with the passage at the inlet, and the second boss comprising a hole in fluid communication with the passage at the outlet.
- 30 7. A thermally controlled apparatus for lining a semiconductor processing chamber comprising:
 - a center member;
 - a flange circumscribing the center member;
 - a cylindrical wall projecting from the center member
- 35 inside of the flange; and
 - a passage disposed in the center member having an inlet and an outlet.





a lid disposed opposite the cylindrical wall, the lid and the wall defining a plenum at least partially therebetween.

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9. The apparatus of claim 8 wherein the center member further comprises:

a plurality of nozzles disposed in the center member providing fluid access to the plenum.

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10. The apparatus of claim 8 further comprising:

a gas feedthrough fluidly coupled to the plenum through a hole disposed in the lid.

15 11. A semiconductor processing chamber comprising:

a wall, a bottom and a lid assembly defining a chamber volume;

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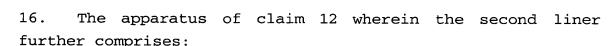
a substrate support disposed within the chamber volume; and,

a chamber liner disposed in the chamber volume, the chamber liner having a passage at least partially disposed therein, the passage having an inlet and outlet adapted to flow a fluid through the passage.

- 25 12. The chamber of claim 11 wherein the chamber liner further comprises at least one of:
 - a first liner disposed proximate the lid assembly; or
 - a second liner disposed about the substrate support.
- 30 13. The chamber of claim 11 wherein the chamber liner is retained in the chamber by a clamp affixed to the chamber.
 - 14. The chamber of claim 11 wherein the chamber liner is comprised of a thermally conductive material.

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15. The chamber of claim 11 wherein the chamber liner is comprised of a material selected from the group of aluminum, ceramic and stainless steel.



a base having the passage disposed within; and an inner wall connected to the base.

17. The apparatus of claim 16 wherein the second liner further comprises:

an outer wall connected to the base.

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- 18. The apparatus of claim 16 wherein the second liner further comprises:
- a first and second boss projecting from the base, the first boss comprising a hole in fluid communication with the passage at the inlet, and the second boss comprising a hole in fluid communication with the passage at the outlet.
 - 19. The apparatus of claim 16 wherein inner wall further comprises a magnet disposed in the inner wall.

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- 20. The apparatus of claim 17 wherein the outer wall further comprises a pumping port.
- 21. The apparatus of claim 12 wherein the first liner 25 further comprises:
 - a center member having the passage disposed within;
 - a flange circumscribing the center member; and,
 - a cylindrical wall projecting from the center member inside of the flange.

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- 22. The apparatus of claim 21 further comprising:
- a lid disposed opposite the cylindrical wall, the lid and the wall defining a plenum at least partially therebetween.

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23. The apparatus of claim 22 wherein the center member further comprises:

a plurality of nozzles disposed in the center member providing fluid access to the plenum.

- 24. The apparatus of claim 22 further comprising:
- a gas feedthrough fluidly coupled to the plenum through a hole disposed in the lid.
 - 25. Apparatus for lining a semiconductor processing chamber comprising:
- a liner having a flurality of apertures formed at least partially therein; and
 - a lid having an inlet, the lid disposed proximate the liner and defining a plenum at least partially therebetween.
 - 26. The apparatus of claim 25 further comprising:
 - a nozzle disposed in each of the plurality of apertures.
- 27. The apparatus of claim 26, wherein the nozzle is 20 comprised of quartz, silicon carbide, silicon, aluminum nitride, aluminum oxide or combinations thereof.
 - 28. The apparatus of claim 26, wherein the liner further comprises:
- a channel having an inlet and an outlet disposed in the liner.
 - 29. A nozzle for providing fluid entry to a processing chamber comprising:
- 30 a mounting portion adapted to be couple to the processing chamber; and
 - a gas delivery portion, the mounting portion and the gas delivery having one or more passages extending through.
- 35 30. The nozzle of claim 29, wherein one of the one or more passages comprises:
 - a central passage extending at least partially through the mounting portion; and





one or more secondary passages disposed in the gas delivery portion fluidly coupling the central passage to the processing chamber.

5 31. The nozzle of claim 30, wherein the gas delivery portion further comprises:

a end proximate the mounting portion, wherein an outlet of the one or more secondary passages are disposed at least about 0.25 inches from the end.

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- 32. The nozzle of claim 30, wherein the secondary passages are directed to deliver gas at an angle relative an end proximate the mounting portion.
- 15 33. The nozzle of claim 32, wherein the angle is about 15 to about 35 degrees.
 - 34. The nozzle of claim 29, wherein one of the one or more secondary passages comprises:
- 20 a central passage extending through the mounting portion and the gas delivery portion; and

one or more secondary passages fluidly coupling the central passage to the processing chamber.

- 25 35. The nozzle of claim 29, wherein the gas delivery portion has a curved distal end.
- 36. The nozzle of claim 29, wherein the gas delivery portion and the mounting portion have an oblique 30 orientation.

